

## **Sample Collection**

### **Sample Point Selection**

- ✓ Choose a faucet that will provide a representative sample of the water circulating in the distribution system. A faucet supplied from a main distribution pipeline is best. Avoid sampling from a dead end main where the water may be old and stagnant. A distribution system map is a very helpful reference when selecting sampling locations.
- ✓ Select faucets that are in frequent use. The pipes supplying a faucet that has not been used for weeks or months contain stagnant water and sediment, which may provide a breeding ground for bacteria. This material is difficult to flush out and a sample from such a faucet may not truly indicate the quality of the water in the system at the present time.
- ✓ Inspect the faucet before collecting the sample and avoid any faucet that is dusty, dirty, or corroded. Inside faucets are desirable because they are likely to be cleaner than an outside faucet, but they have the disadvantage of being more inaccessible. Therefore, many water system operators sample from faucets on the outside of buildings and this practice has proven satisfactory when the faucet is carefully chosen.
- ✓ Avoid a faucet that leaks water around the stem. The leaking water may run down the outside of the faucet and contaminate the sample by dripping into the bottle. This is a frequent cause of positive samples. For the same reason avoid faucets where water "curls" back up onto the threads at the mouth of the faucet.
- ✓ Do not use a faucet that is close to the ground where splashing spray could get into the bottle. Neither should shrubbery or tall grass surround the faucet. Dust and bacteria on the vegetation are stirred up, getting to the faucet and could contaminate the sample.
- ✓ The sample faucet should discharge downward. It is nearly impossible to obtain a satisfactory sample when the faucet discharges vertically upward and the sample is questionable when the faucet discharges at an upward angle or to the side. Drinking fountains and water coolers that produce a smooth stream at an upward angle are sometimes satisfactory for sampling but must be chosen carefully. Most fountains have a spring-loaded faucet that makes sample collection especially awkward and inconvenient.
- ✓ Never collect a sample from a hose or any other temporary attachment fastened to the faucet.
- ✓ Do not collect samples from fire hydrants, corporation stops, or plug valves. It is usually impossible to obtain a smooth flow of water from such valves.
- ✓ Do not use a faucet that is wrapped with insulation to protect against freezing.
- ✓ Kitchen and bathroom faucets are frequently equipped with aerators and/or screens. DO NOT sample from these faucets. If no alternative is available, remove the aerator and screen and let the faucet flow for several minutes before collecting the sample. Be suspicious of swing-type faucets. Contamination could be sucked into the faucet through the swing connection.
- ✓ Be sure to sample the cold water faucet, not the hot water.
- ✓ Avoid faucets that are supplied through a water softener, a charcoal filter, or any other type of household filter or purification device. These devices frequently become breeding grounds for bacteria and other organisms that may actually contaminate the water flowing through it.